

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An optical coupling device for injecting light between end faces of two optical waveguides, said device comprising:

a holding element for holding a first optical waveguide,

a first holding block which is fitted to ~~the~~ a second optical waveguide,

an elongate, variable-length element which is supported on the first holding block and extends in its longitudinal direction, starting from the first holding block, parallel to the end face of the second optical waveguide and on which the holding element is provided, so that the geometrical position of the end face of the first optical waveguide can be varied with respect to the end face of the second optical waveguide, ~~such as an optical waveguide chip characterized by~~, wherein

a second holding block ~~which~~, fitted to the second optical waveguide and spaced from the first holding block with respect to the longitudinal direction of the variable-length element, wherein the second holding block is arranged on the side of the latter variable length element that is facing away from the first holding block, and

by a spring element, which is arranged between the variable-length element and the second holding block and is supported on the latter and by which the variable-length element is held and which permits movements of the variable-length element or the holding element in the longitudinal direction of the variable-length element and suppresses movement of the variable-length element perpendicular to the longitudinal direction of the variable-length element.

2. (Original) The device according to Claim 1, wherein the holding element is formed in one piece with the variable-length element, and the spring element is formed separately therefrom.

3. (Original) The device according to Claim 1, wherein the holding element, the variable-length element and the spring element are formed in one piece.

4. (Original) The device according to Claim 1, wherein the holding element and the spring element are formed in one piece and the variable-length element is formed separately therefrom.

5. (Original) The device according to Claim 2, wherein the spring element is formed by slots in the variable-length element or the holding element, the said slots lying in a plane perpendicular to the longitudinal direction of the variable-length element, the open edges running parallel to the end faces of the optical waveguides.
6. (Original) The device according to Claim 3, wherein the spring element is formed by slots in the variable-length element or the holding element, the said slots lying in a plane perpendicular to the longitudinal direction of the variable-length element, the open edges running parallel to the end faces of the optical waveguides.
7. (Original) The device according to Claim 4, wherein the spring element is formed by slots in the variable-length element or the holding element, the said slots lying in a plane perpendicular to the longitudinal direction of the variable-length element, the open edges running parallel to the end faces of the optical waveguides.
8. (Original) The device according to Claim 5, wherein an even number of slots is provided.
9. (Original) The device according to Claim 6, wherein an even number of slots is provided.
10. (Original) The device according to Claim 7, wherein an even number of slots is provided.
11. (Currently Amended) The device according to Claim 2, wherein the spring element is formed by holes in the variable-length element or the holding element, the said holes lying in a plane parallel to the end faces of the optical waveguides and lying perpendicular to the longitudinal direction of the variable-length element.
12. (Original) The device according to Claim 3, wherein the spring element is formed by holes in the variable-length element or the holding element, the said holes lying in a plane

parallel to the end faces of the optical waveguides and lying perpendicular to the longitudinal direction of the variable-length element.

13. (Original) The device according to Claim 4, wherein the spring element is formed by holes in the variable-length element or the holding element, the said holes lying in a plane parallel to the end faces of the optical waveguides and lying perpendicular to the longitudinal direction of the variable-length element.

14. (Original) The device according to Claim 1, wherein the spring element consists of bent spring sheet, whose spring sections lie in planes which are perpendicular to the longitudinal direction of the variable-length element, the bent edges running parallel to the end faces of the optical waveguides.

15. (Original) The device according to Claim 6, wherein the length of the variable-length element is selected such that the spring element is under pre-stress in the initial position of the variable-length element.

16. (Currently Amended) ~~A clip connects the~~ The device according to Claim 1, wherein the two holding blocks are connected to each other by a clip.

17. (Original) The device according to Claim 1, wherein the two holding blocks are connected to each other by a frame, a clip being provided at the top and bottom in each case between the two holding blocks, and the clips being produced from one piece with the holding blocks.

18. (Currently Amended) The device according to Claim 1, wherein the holding element has a ferrule, in which the optical waveguide ~~or the optical fibre~~ is fixed.

19. (New) An optical coupling device for injecting light between end faces of two optical waveguides, comprising:

first and second optical waveguides, wherein the first optical waveguide is an optical fiber and the second optical waveguide is a waveguide chip, and each of the waveguides has an end face;

first and second holding blocks affixed to the second optical waveguide in a spaced relation;

a holding element for holding the first optical waveguide;

a spring element supported in the second holding block; and

an elongate variable-length element,

wherein the variable-length element is supported on the first holding block and its length is paralleled to the face of the second optical waveguide, and the variable-length element ends in contact with the holding element such that it is possible to vary the geometrical position of the first optical waveguide with respect to the second optical waveguide, and

wherein the spring element is positioned between the holding element attached to the variable-length element and the second holding block, and is supported on the second holding block, the spring element having the form of a body having holes selected from the group consisting of slots and bores extending perpendicular to the length direction of the variable-length element and paralleled to the end face of the second waveguide.

20. (New) An optical coupling device for injecting light between end faces of two optical waveguides, comprising:

first and second holding blocks affixed to an optical waveguide chip in a spaced relationship;

a variable-length element disposed at least partially between the holding blocks and supported on the first holding block, wherein the variable length element is capable of extending and shortening to a fixed desired extension in a longitudinal direction parallel to an end face of the optical waveguide chip;

a holding element disposed along the variable length element, the holding element capable of holding an optical waveguide;

a spring element arranged between the variable-length element and the second holding block, wherein one end of the spring element is coupled to the second holding block and the opposite end of the spring element is coupled to the variable length element, the spring element

designed to permit movement of the variable-length element in the longitudinal direction and suppress movement of the variable-length element perpendicular to the longitudinal direction.